

ATB - NEAR VISUAL ACUITY TESTING

(DD Form 2808, Block 63. 'NEAR VISION') [As of: 1 May 2002]

Purpose/Indications: Near vision.

Mandatory for all classes of FDME. This measures the best visual acuity at near (14 inches, 16 inches, or 40 cm, depending on test used*) WITHOUT any kind of correction whatsoever, followed by best-corrected visual acuity at near WITH spectacle prescription (if the patient wears any). NO contact lenses allowed during testing and must be removed at least 24 hours prior to examination.

This measures the clarity of vision or the ability of the visual system to resolve detail at near. A patient's visual acuity at near depends upon the accuracy of retinal focus, the integrity of the eye's neural elements, and the interpretive faculty of the brain. Near visual acuity also depends upon the eye's ability to focus clearly for objects at closer distances (accommodation).

It is important to conduct near visual acuity on all patients after distant acuity testing. Testing for near visual acuity before distant visual acuity may disadvantage the patient, depending on accommodative (focusing) ability.

Equipment:

Standard Reduced Snellen Acuity Card
Occluder (to cover one eye at a time)

-or- AFVT (Armed Forces Vision Tester) or the OPTEC 2300

Set-up:

Standard Reduced Snellen Acuity Card:

- Patient is at the designated test distance from the Reduced Snellen Acuity Card (test distances may vary so ensure the test distance is correct; typically they are set for 16 inches, 14 inches, or 40 cm*). There should be adequate illumination, with the light source either above or slightly behind the patient. Care should be taken so that the light is not directed toward the patient's eyes.
- Patient holds occluder and covers eye as directed by tester. Patient may use palm of hand, if necessary, but ensure patient is using the palm, not the fingers, to preclude seeing between the fingers. Patient must keep both eyes open, must not press on either eye, and must not squint.

AFVT or OPTEC 2300:

- Patient is seated comfortably at the AFVT or OPTEC 2300.
- Near letter acuity slide(s) set correctly (see manual).
- Patient must push forehead against bar for internal light to work.

*** Conversions:**

14 inches = 35.56 cm	16 inches = 40.64 cm	40 cm = 15.75 inches
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Step-By-Step Procedure.

Uncorrected Near Vision:

- TEST UNCORRECTED VISUAL ACUITY FIRST! (This is important because a patient may be able to memorize the letters on the chart with corrected vision and, intentionally or unintentionally, say aloud the smaller letters on the test when uncorrected, whether or not actually seen by the patient.)
- Observe the patient during testing to ensure no squinting (or at least attempt to observe the patient behind the AFVT/OPTEC 2300).
- Instruct the patient to cover one eye (or occlude the non-tested eye with the appropriate buttons on the AFVT/OPTEC 2300) and direct patient not to squint. By convention, it is best to test right eye first, then left eye for consistency.

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| <ul style="list-style-type: none">- IMPORTANT NOTE ABOUT 20/20 NEAR VISUAL ACUITY STANDARD FOR FDMES! Per AR 40-501, paragraph 4-12, a (2), ”...no more than 1 error per 5 presentations of 20/20 letters, in any combination, on the AFVT or any Snellen near visual acuity card.”- Issue: AFVT line has 10 letters but is split into two sets of five letters positioned next to each other on the same line. You may still test the entire line, if desired, but the patient is still only required to get 4 out of 5 letters that are on a 20/20 line to be considered a ‘pass’ for an FDME. Therefore, entries of 20/20 or 20/20⁻¹ are both passing entries. Most Snellen cards have 8 letters (some have 5, 6, or 7 letters) per line. The regulation allows for presentation of 5 letters “in any combination” so you may meet the requirement. If in question, refer to the Eye Clinic for verification. |
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- Instruct the patient to, “read the smallest line of letters you can, without squinting” (or words to that effect).
- If the patient reads at least 4 or 5 out of 5 letters on a 20/20 line, record 20/20⁻¹ or 20/20 for that eye, whichever is applicable. Repeat testing for other eye.
- If the patient misses two letters or more out of 5 letters on a 20/20 line, ask patient to read the next larger line of letters; continue this process until patient reads at least 4 out of 5 letters on a line of letters. Then, encourage the patient to read any letters on the next smallest line if they can. Record visual acuity based on standard methods. Repeat testing for other eye.

- For example, if patient reads the entire 20/30 line easily, but can only read two of the letters on the 20/25 line, then record the visual acuity as 20/30⁺².

REFERRAL CRITERIA – Uncorrected Near Vision:

Class 1/1A FDME - refer if either eye is worse than 20/20⁻¹ uncorrected at near; patient requires cycloplegic exam also but must be no worse than 20/20⁻¹ uncorrected at near.

All other classes of FDME – refer if either eye is worse than 20/400 uncorrected.

Corrected Near Vision:

- TEST CORRECTED VISUAL ACUITY AFTER UNCORRECTED.
- For Class 1/1A FDME, there is no need to perform near visual acuity WITH spectacle prescription at all because Class 1/1A FDMEs should all have 20/20 or 20/20⁻¹ uncorrected near visual acuity in each eye. If not, referral is necessary.
- For all other classes of FDME, repeat the near visual acuity procedure for the right eye WITH near spectacle correction if patient wears any (NO contact lenses!). Patient should be wearing the glasses he/she uses with aviation duties. For bifocal wearers, be certain patient is looking through the near portion of the spectacles. For progressive bifocal wearers, also ensure patient is angled correctly for optimal near visual acuity. If patient was at least 20/20⁻¹ at near without correction, this test can be skipped and a horizontal line drawn next to “Corr. to 20/--“.
- Repeat procedure for the left eye for corrected near visual acuity.

REFERRAL CRITERIA – Corrected Near Vision:

Class 1/1A FDME–must see Optometrist or Ophthalmologist for cycloplegic refraction.

Class 1/1A FDME’s should NOT have a prescription for near visual acuity.

All other classes of FDME – refer if either eye is worse than 20/20⁻¹ with correction.